

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. – 14. (Canceled)

15. (New) A distributed data processing system comprising:

at least two interconnected units, the two units each comprising one of a central processor unit or a computer, each unit including an independent operating system and a communications driver for inter-unit communications;

wherein a first of the at least two units is arranged for hosting a first actual process and a second of the at least two units is arranged for hosting a second actual process;

a virtual link handler hosted at the first unit and the second unit, the virtual link handler hosting at the first unit a first shadow process representing said second actual process, the virtual link handler hosting at the second unit a second shadow process representing said first actual process, each of said first and second shadow processes being a dummy process unable to provide an essential functionality that is significant of its corresponding actual process, and

a driver adapter provided for the first unit and the second unit for providing inter shadow process signal communication.

16. (New) The system of claim 15, wherein the driver adapter provides inter shadow process signal communication between the respective unit and of a respective communications driver and a respective operating system.

17. (New) The system of claim 15, wherein each process hosted by a respective unit has assigned a locally unique process identifier, and

said first shadow process hosted by said first unit is identified at said first unit by a first shadow process identifier that corresponds to a first actual process identifier of said first actual process hosted by said second unit, and

said second shadow process hosted by said second unit is identified at said second unit by a second shadow process identifier that corresponds to a second actual process identifier of said second actual process hosted by said first unit.

18. (New) The system of claim 15, wherein at least one of said at least two unit is arranged for hosting a plurality of shadow processes that each represents an actual process hosted by respective different ones of a plurality of said at least two units.

19. (New) The system of claim 18, wherein said shadow process identifier is a process identifier uniquely assigned to a respective shadow process throughout the system for providing distributed data processing.

20. (New) The system of claim 19, wherein said shadow process identifier in conjunction with a system address of its hosting unit is a unique system identifier of respective shadow process throughout the system for providing distributed data processing.

21. (New) The system of claim 15, wherein each one of said actual processes is statically associated with or statically resident of a particular one of said at least two units for providing distributed data processing.

22. (New) The system of claim 15, wherein the virtual link handler includes means for maintaining a reference list of associations of actual processes and shadow processes with respective hosting units for providing distributed data processing.

23. (New) The system of claim 22, wherein the virtual link handler includes means for maintaining an address table co-located with each communicating unit, the address table being derived from the reference list and providing a relation between a shadow process and a system address of its hosting unit.

24. (New) The system of claim 15, wherein the virtual link handler includes means for temporarily modifying a signal to be communicated from an actual process hosted by one of said at least two units and targeted for a different actual process hosted by a different one of said at least two units by including in the signal at least the shadow process identifier of its corresponding shadow process that is hosted by said different one of said at least two units.

25. (New) The system of claim 24, wherein the virtual link handler includes means for modifying a signal to be communicated from a shadow process hosted by an associated one of said at least two units and targeted for a different shadow process hosted by a different one of said at least two units by including in the signal at least the process identifier of an actual process that is hosted by said associated one of said at least two units.

26. (New) The system of claim 15, wherein the driver adapter of a respective one of said at least two units is provided with an interface for communicating directly with a shadow process hosted by said respective one of said at least two units.

27. (New) The system of claim 15, wherein the driver adapter of a respective one of said at least two units is provided with an interface for communicating indirectly with a shadow process hosted by said respective one of said at least two units by way of a collocated operating system.

28. (New) The system of claim 15, wherein the driver adapter of a respective one of said at least two units is provided with an interface for communicating directly with a communications driver hosted by said respective one of said at least two units.

29. (New) The system of claim 15, wherein the driver adapter of a respective one of said at least two units is provided with an interface for communicating indirectly with a communications driver hosted by said respective one of said at least two units by way of a co-located operating system.

30. (New) A method for providing inter-unit communication in a system comprising at least two units, the two units each comprising one of a central processor unit or a computer, each unit including an independent operating system and a communications driver for inter-unit communications; the method comprising: hosting a first actual process at a first of the at least two units:

hosting a second actual process at a second of the at least two units:

providing a virtual link handler at the first unit and the second unit and thereby hosting at the first unit a first shadow process representing said second actual process;

hosting at the second unit a second shadow process representing said first actual process, each of said first and second shadow processes being a dummy process unable to provide an essential functionality that is significant of its corresponding actual process, and

providing a driver adapter for the first unit and the second unit for providing inter shadow process signal communication.

31. (New) The method of claim 30, providing the driver adapter for providing inter shadow process signal communication between a respective unit being co-located with a respective one of said first and second shadow processes and one of a respective communications driver and a respective operating system.

32. (New) The method of claim 30, further comprising using the virtual link handler for communicating a signal to be transferred from said first actual process to said second actual process by dispatching the signal from the first actual process with the second actual process identifier as the identifier of the destination, receiving the dispatched signal at the second shadow process;

generating by the second shadow process a first amended signal by amending the destination identifier of the signal to identify the first shadow process as the next destination;

forwarding by way of said driver adapter the first amended signal from said first unit to said second unit;

receiving by way of said driver adapter the first amended signal by the first shadow process;

recovering by the first shadow process the signal by amending the destination identifier of the first amended signal to be the second actual process identifier for

identifying the second actual process as the next destination, and

dispatching the recovered signal from the first shadow process with the identifier of the second actual process as the identifier of the next destination.